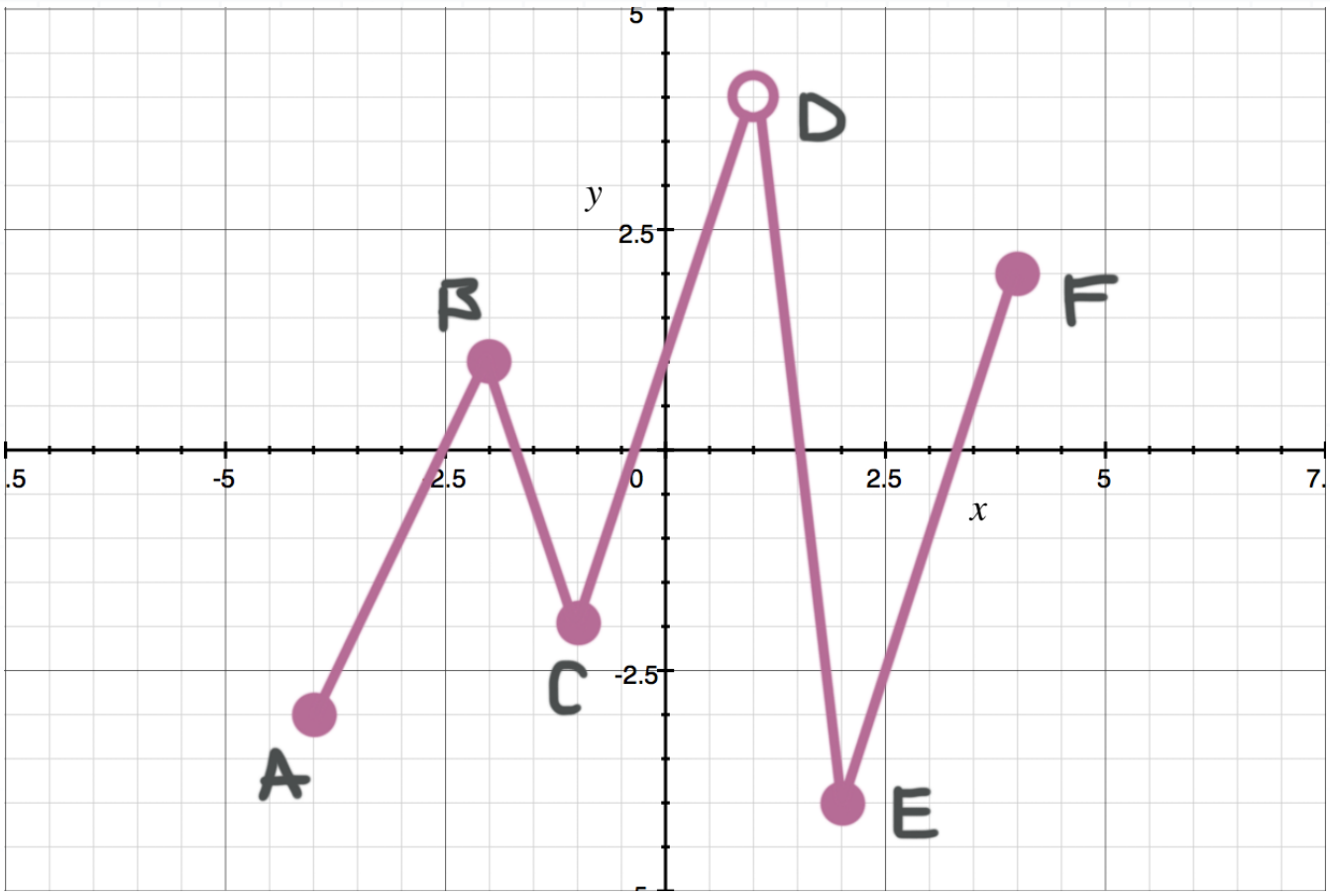
Topic: Sketching graphs

Question: Classify the point A.



Answer choices:

A Absolute maximum

B Absolute minimum

C Local maximum

D Local minimum

E None of these

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Solution: E

The point A on the graph is neither a relative minimum nor an absolute minimum. The point is not a relative minimum because there is not an *open* interval containing the point on which the function value at the point is a minimum.

To say it more simply, whenever a point is on the end of the graph, like point A, it can't be a relative maximum or minimum. It *can* be an absolute maximum or minimum, but in this case, point A is neither the lowest nor highest point on the graph.

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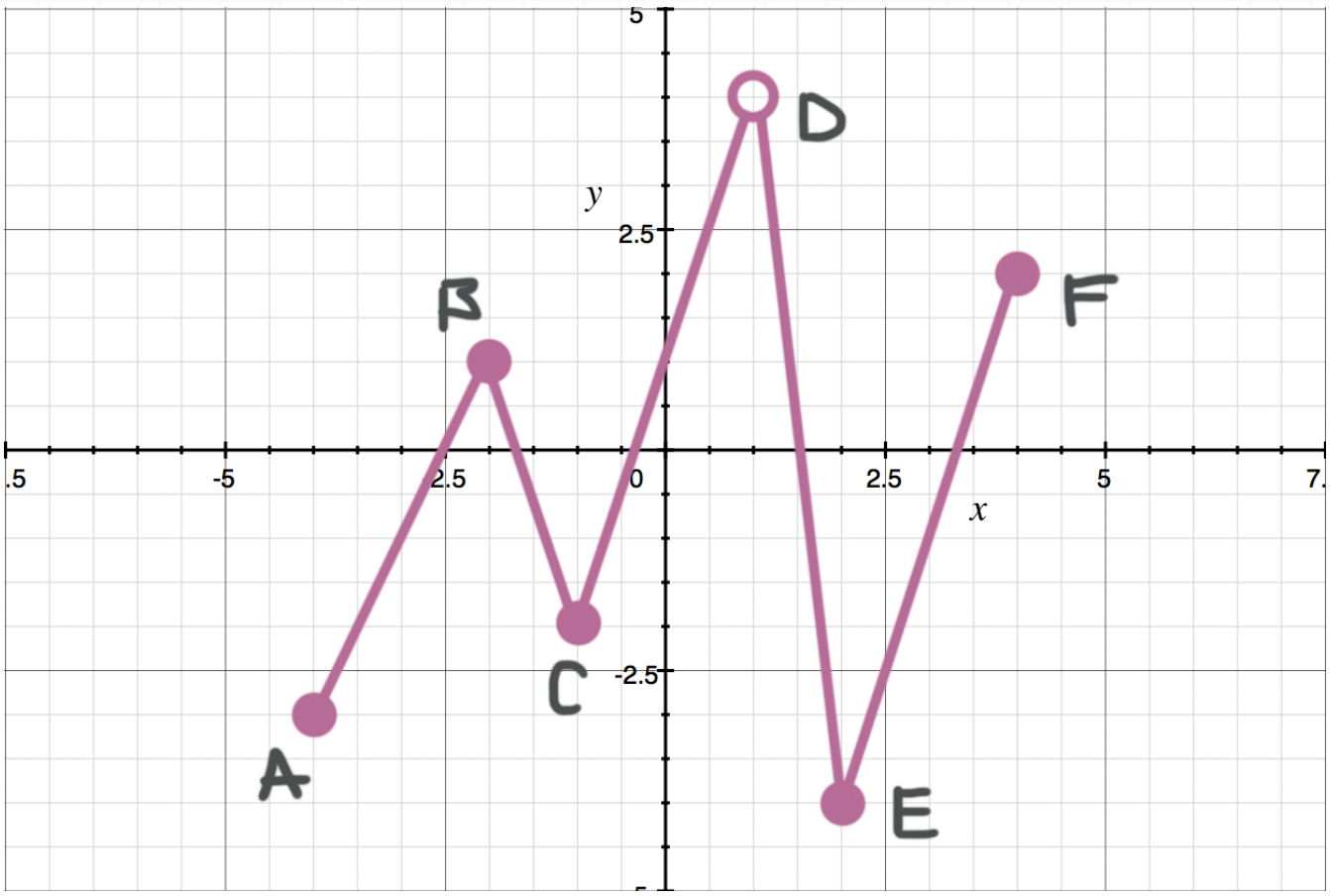
Question: Classify the point B.



Answer choices:

A Absolute maximum

B Absolute minimum

C Local maximum

D Local minimum

E None of these

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Solution: C

The point B on the graph is a relative maximum. This is because there's an open interval containing the point B on which the function value at the point is a maximum.

In other words, the point B is the highest point in that area of the graph, but not the highest point on the entire domain of the graph.

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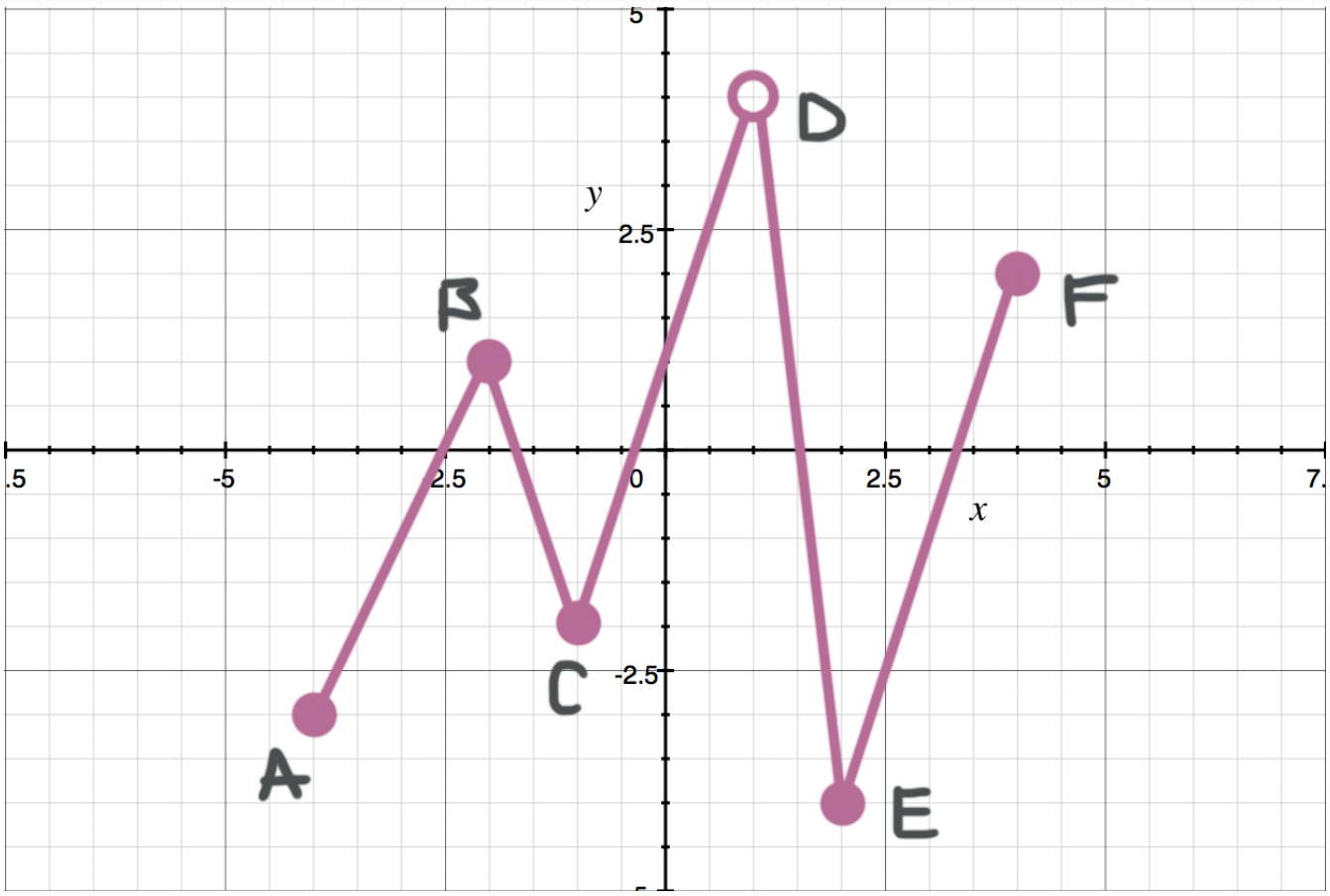
Question: Classify the point C.



Answer choices:

A Absolute maximum

B Absolute minimum

C Local maximum

D Local minimum

E None of these

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Solution: D

The point C on the graph is a relative minimum. This is because there is an open interval containing the point C on which the function value at the point is a minimum.

In other words, the point C is the lowest point in that are of the graph, but not the lowest point on the entire domain of the graph.

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